

Remarks

The Examiner rejected claims 1–9 and 11–28 and objected to claim 10. Claims 6, 7, and 18 have been canceled. Claims 1, 8, 14, 17, 27, and 28 have been amended. Claims 1–5, 8–17, and 19–28 remain in the application. Paragraphs 16 and 19 of the specification and drawing FIG. 1 have also been amended.

The Examiner objected to the drawings under 37 CFR 1.83(a). According to the Examiner, (1) the elongated guide including a conveyor belt segment of claim 10 and (2) the embodiment of claim 7 in which the second end of the elongated guide is permanently affixed at one of the first and second sides of the belt must be shown or that feature canceled from the claim. Applicant traverses the first objection because FIG. 1 of the drawing depicts the guide 40 as a modular belt composed of individual modules. (See the lines between consecutive rollers indicating the modular, belt-like structure of the guide.) Furthermore, in describing FIG. 1, Paragraph 16 points out that the guide may be realized as an Intralox Series 900 Roller Top belt, which is familiar to those skilled in the art of making conveyors using belts and is commercially available from the same source as the preferred roller-top belt 16 mentioned in Paragraph 14. Consequently, applicant maintains that the drawing shows sufficient detail to support claim 10. In view of the cancellation of claim 7, the Examiner's second objection to the drawing is moot.

Applicant has unilaterally amended drawing FIG. 1 to relabel previous reference number 46 as new reference number 41. This change has been made because of the duplicate use of reference number 46 to refer to one of the moving elements depicted in FIGS. 2A–2C. Paragraph 16 has been amended to change the reference to the rollers 46 to the rollers 41 to comport with the drawing change. Paragraph 16 has also been amended to correct a transcriptional error, in which the surface of the rollers 41 was referred to as a low-friction “sliding” surface, instead of a

low-friction “rolling” surface, which was intended, as clearly indicated by the language of original claims 9 and 10. Finally, Paragraph 19 has been amended to change “allows” to “allow,” correcting subject-verb agreement. None of these amendments adds new matter to the application.

The Examiner rejected claims 1–16 under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement because the claims contain subject matter not described in such a way as to enable one skilled in the art to make or use the invention. According to the Examiner, claim 1 states that the rollers of the roller-top conveyor belt can be rotated to urge a conveyed article toward the first or second side of the belt, but no means for rotating the rollers to urge a conveyed article is shown or disclosed. The Examiner further states that driven rollers, not passive rollers, would be required for the rollers to urge the conveyed articles to one side of the conveyor or the other. Applicant traverses the rejection.

When articles conveyed atop the rollers encounter a stop, such as the guide 40, the articles tend to move along the guide because of the forward motion of the advancing belt. Because the guide is angled relative to the direction of travel of the belt, the articles have both forward and sidewise components of motion. Friction between the conveyor-belt rollers and the articles advancing along the guide causes the rollers to rotate. Because the rollers rotate on axles aligned generally in the direction of belt travel, they enable the articles to move sidewise more easily than if the belt had no rollers. Applicant has amended claim 1, as well as claim 28, by replacing “urge” with “divert” to echo the language of the specification in Paragraph 18 describing the action of the rollers in terms that would enable one skilled in the art to make and use the invention.

The Examiner rejected claims 14–15 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as his invention. In particular, the Examiner points out the lack of antecedent basis for the term “the linear drive” and the fact that the pivot shaft rotates the “belt.” Amended claim 14 overcomes the rejection by substituting the term “rotational drive” for “linear drive” and “elongated guide” for “belt.”

The Examiner rejected claims 1, 3–4, 16–17, 20, and 26–28 under 35 USC § 102(e) as being anticipated by Wolf (US 2004/0231960). In his § 102(e) anticipation rejection, the Examiner stated that Wolf shows all the structure of the rejected claims. MPEP § 2131 provides: “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Amended original independent claims 1, 17, 27, and 28 contain elements not disclosed in Wolf: (1) a linear drive disposed at a first location defining a lateral track above a roller-top conveyor belt and traversing the belt and having a downwardly extending arm selectively driven along the track (claim 1); (2) an elongated guide with roller wheels having low-friction surfaces rotatable about vertical axes to engage a conveyed article in low-friction rolling contact (claim 17); (3) a plurality of rollers protruding outward of an upper surface of the belt to support a conveyed article and arranged to rotate on axles mounted in the conveyor belt generally in the conveying direction (claims 27–28). Therefore, the § 102(e) rejection of independent claims 1, 17, 27, and 28 and of dependent claims 3–4, 16, 20, and 26 is unsupported by the art and should be withdrawn.

The Examiner rejected claims 1–8, 11–12, 16–17, 19–24, and 26–28 under 35 USC § 103(a) as being unpatentable over Lapeyre et al. (US 6,148,990) in view of Bonnet (US

5,988,356). Claim 1 has been amended to incorporate the features of original claim 6; claim 17 has been amended to incorporate the features of claim 18; and claim 27 has been amended to define the drive as disposed above the upper surface of the belt. Claim 28 requires that the elongated guide be suspended above the outer surface of the belt. The rejection is now addressed.

Because original dependent claim 18 was not subject to this rejection and its features are now incorporated in independent claim 17, the rejection of claim 17 on these grounds is overcome. In the rejection, the Examiner stated that the limitations of claims 6–8 and 20, i.e., that the drives be positioned on a track above the conveyor belt, is deemed to have been an obvious design choice. MPEP § 2142 provides: “[A] prior art reference [used to establish a *prima facie* case of obviousness] … must teach or suggest all the claim limitations.” Lapeyre et al. and Bonnet, in combination, do not show all the limitations of the claims as amended and, furthermore, do not suggest the modification of its own teaching to arrive at applicants’ invention. Bonnet’s diverter 40 rides on tracks 46 and 52 at or below the level of the carrying belt 28. This requires that the tracks be positioned beyond the ends of the carrying belt, which limits the length of the carrying belt to the length of the sorting station. Because the carrying belt 20 can’t extend in either direction beyond the sorting station, extra belts have to be used to feed articles to and receive them from the carrying belt. And Bonnet’s carrying belt with tracks at each end does not allow for multiple sorting stations along the length of a single, long conveyor belt, which is desirable in many applications, especially where a variety of different tires, for example, are to be sorted. Because neither reference suggests the desirability of positioning the tracks or the guide drive above the belt, the rejection of the independent claims and their dependent claims is improper and should be withdrawn.

The Examiner rejected claims 1–2, 9, and 16–20 under 35 USC § 103(a) as being unpatentable over Lapeyre et al. in view of Bell-Irving (US 1,729,671). Because the two references, alone or in combination, do not teach all the elements of amended independent claim 1, the rejection of claim 1 should be withdrawn. Claim 17 has been amended to define the elongated guide as including roller wheels having low-friction surfaces extending from the wall of the guide and rotatable about vertical axes to engage a conveyed article in low-friction rolling contact. Support for the amendment is found in original claim 18, FIG. 1, and Paragraph 16 of the specification. Bell-Irving teaches corrugated rollers 30 contacting the conveyed articles. The powered corrugated rollers act and the alternative reciprocating saw tooth racks 26 engage and push conveyed blocks along the guide. They do not provide low-friction surfaces along which conveyed articles can roll without damage to labels or fragile articles. Because the references don't teach or suggest all the elements of claim 17, the rejection of claim 17 should be withdrawn. Furthermore, the rejection of the dependent claims of claims 1 and 17 should be withdrawn.

The Examiner rejected claims 1–2, 13, and 16–17, and 25 under 35 USC § 103(a) as being unpatentable over Lapeyre et al. in view of Carpenter (US 1,532,228). Because the two references, alone or in combination, do not teach all the elements of amended independent claims 1 and 17, the rejection of claim 1 should be withdrawn. Furthermore, the rejection of the dependent claims of claims 1 and 17 should be withdrawn.

The Examiner indicated that claims 14–15 would be allowable if rewritten to overcome the § 112, second paragraph, rejection and to include all the limitations of the base claim and any intervening claims. Claim 14 has been so amended and should now be in condition for allowance along with its dependent claim 15.

In view of the cancellation of claim 6, claim 8 has been amended to depend from claim 1.

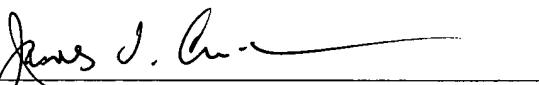
Applicant respectfully requests entry of the amendments to the claims, the specification, and the drawing, reconsideration of the rejection of claims 1-5, 8-9, 11-17, and 18-28 and the objection to claim 10, and allowance of those claims in view of the remarks and amendments. This amendment is being mailed with a petition for a one-month extension of time. The amendment also includes an additional independent claim. Authorization to charge the extension of time fee, the additional independent claim fee, and any other fees deemed necessary for consideration of this response to Deposit Account No. 12-0090 is hereby given. If the Examiner thinks a telephone conference would expedite the prosecution of this application, he is invited to call the undersigned attorney.

Respectfully submitted,
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Amendments to the drawing

Drawing FIG. 1, which appears on the drawing sheet marked "Replacement Sheet" appended to this response, is amended as follows:

Former reference number 46, referring to the rollers in the guide 40, has been changed to 41, as reflected in amended Paragraph 16 of the specification. This change is necessary because reference number 46 is also used to refer to one of the moving elements depicted in FIGS. 2A–2C.